

cant fact, for example, that while he mentions *Puccinia graminis* as "vulgatissima in graminibus," he does not chronicle *Æcidium Berberidis*.

The herbarium of de Schweinitz rests in the Academy of Natural Sciences, Philadelphia. It is very much to be desired that a reprint be made of the *Synopsis Fungorum*, as it is practically inaccessible to the ordinary student. Still more desirable is it that a *Synopsis Fungorum* be compiled that shall include all the North American species identified and described up to the present time, and which now, perhaps, more than double in number the enumeration of de Schweinitz.

A Botanical Holiday in Nova Scotia. II.

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By June 21st we had exhausted the time laid out to be spent in the neighborhood of Halifax, and taking the Windsor and Annapolis Railway to the latter place, caught the steamer crossing to Digby. Here we were first able truly to realize the wonderful rise of the tide in the Bay of Fundy, our landing being made from the *hurricane* deck, then *below* the level of the wharf. Quitting the boat for the rail again, we were soon on a road, the Southern Counties, which we concluded to be chiefly remarkable for the slow rate at which it could travel, no less than four and a half hours being taken to cover the 65 miles between Digby and Yarmouth.

At Yarmouth, the most southern point touched in our trip, we had expected to find considerable change in the vegetation, but this was less marked than we had looked for, so that a considerable part of the four days spent here was devoted to mounting sea-weeds and drying the plants, of which we had a very large accumulation on hand. A modification of Mr. Macoun's method of drying mosses was tried on flowering plants and found to work most successfully. Our hotel being provided with an unroofed balcony, as soon as the sun had thoroughly heated the floor of this, we took our plants, and placing each sheet of specimens between two driers, covered the floor with a layer, small stones at the corners of the sheets preventing their disturbance by the wind. Only one thickness was spread at a time, and no pressure used except the weight of the single drier covering the specimens. The plan was admirable for plants wilted by a couple of days in press, an hour under a hot sun serving to completely cure specimens that would have taken four or five days changing;

but with ones fresh or insufficiently wilted, the process was useless, as the absence of pressure allowed the leaves to curl up. Plants thus preserved seemed to keep their color better than when done by the ordinary method, but were, I fancy, rendered more brittle. A marked feature of Yarmouth and vicinity were the cut hedges of white or English thorn, which, in connection with the trees and flowers extensively planted, had a very pleasing effect: Fogs, however, were very prevalent, and the melancholy sound of the fog horn constantly ringing in the ears had anything but a cheering influence over a stranger. Of our findings here the most noteworthy were *Lepigonum salinum*, Fries, on brackish sands; *Alchemilla vulgaris*, L., abundant in waste places, and in fields bordering the harbor, *Galium Aparine*, L., on a bar running out into the sea, where also were *Potamogeton pectinatus*, L., in brackish pools, and *Allium Schoenoprasum*, L., in large bunches on dry ground, but close by; *Tussilago Farfara*, L., common along the streets and railway track; *Symplocarpus foetidus*, Salisb., (the only place we saw it in Nova Scotia), in a pasture field near the lighthouse on Cape Forchen; and *Rhinanthus Crista-galli*, L., everywhere. *Scirpus pungens*, Vahl., and *Carex salina*, Wahl., *tentaculata*, Muhl., *filiformis*, L., and *viridula*, Mx., were also collected, as were *Agrostis alba*, L., *Elymus mollis*, Trin., *Aira cæspitosa*, L., and *Holcus lanatus*, L. The last was very plentiful in the fields, but especially so along grassy banks overhanging the water.

Several probably paying localities had been marked on our way down from Halifax, and the first of these to be reached on our return journey was Annapolis. All about us now was historic ground, this being the ancient capital of Acadia and the oldest European settlement north of the Gulf of Mexico. Visited by the French under Champlain in 1604, it was made the following year the site of their first colony in America. Then Porte Royale, it remained so till a century later, when, captured by the English, the name was changed in honor of Queen Anne to Annapolis Royal, since abbreviated to Annapolis. Like other Acadian strongholds the fort is now a ruin, and the place that once rang with the tread of armed men echoes with the merry laughter of children, whose play-ground it is. What a pleasant memory is the evening hour spent on the old grass covered ramparts, the sea with its never ceasing murmur at our feet, and old North Mountain frowning grandly down upon it. What a pleasure, too, is the possession of souvenirs of our visit in *Hyoscyamus niger*, L., found blooming freely in the decaying earth-

works, and *Lychnis vespertina*, L., growing abundantly, not only in the old cemetery connected with the fort, but in the streets, fields, and waste places all about the town. A drive into the country showed the antiquity of the settlement in *Aquilegia vulgaris*, L., *Inula Helenium*, L., *Lysimachia vulgaris*, L., and other tall growing flowers and weeds completely naturalized and established by the roadsides. *Alopecurus pratensis*, L., introduced by the French and known as "French timothy," was the grass generally cultivated for hay, but occasional patches of *Dactylis glomerata*, L., were seen. In the salt marshes *Juncus Gerardi*, Loisel, was in beautiful flower and made quite a show along the beach, where also were seen *Scirpus maritimus*, L. and *Glyceria distans*, Wahl. Between the marshes and the road were, in low ground, *Liparis Loeselii*, Richard., *Scirpus microcarpus*, Presl. and *Carex Pseudo-Cyperus*, L. and *conoidea*, Schk., and on gravelly banks, *Trifolium hybridum*, L. A remarkable form of *Corallorhiza multiflora*, Nutt., was found in the woods near the residence of Mr. Pittman, a gentleman who had kindly invited us to visit him. In shape the flowers were those of *multiflora*, but the whole plant, except the petals, was, in all cases, pale yellow instead of brown or purplish. A day was given to a deep defile in North Mountain, known as the "ice gorge," from the fact that under the rocks there, ice can be found all summer. The bottom of the ravine was occupied by a rivulet clear as crystal, while its sides were densely clothed with a fine growth of hardwood, among which *Ostrya Virginica*, Willd., was noticed for the first time. In places the sombre woods were lightened by the delicate pink flowers of the wood-sorrel, *Oxalis Acetosella*, L., or, as it is sometimes called from its blossoms being supposed to ring the chimes that call the spirits to their moonlight revelry, "fairy-bells;" and in others, ravishing beds of the wax like *Moneses uniflora*, Gr., loaded the air with fragrance. *Osmorrhiza brevistylis*, DC., *Pyrola chlorantha*, Swz., *Epiphegus Virginiana*, Bart., *Habenaria orbiculata*, Torr., *Listera cordata*, R. Br. and *convallarioides*, Hook., *Corallorhiza innata*, R. Br. and the common form of *multiflora*, Nutt., *Eleocharis obtusa*, Schultes, *Carex rosea*, Schk., and *Cystopteris fragilis*, Bernh., were also collected and fully compensated us for our tiresome climb over the rough sides of the mountain.

Our next stop was at a little wayside station, Kingston, to examine the bad lands lying along this part of the railway. The sand hills, covered with the withered flowers and half-ripened fruit of *Hudsonia ericoides*, L., where a week before they had

been a mass of golden bloom, gave evidence of the advance of the season. The same localities abounded in *Corema Conradii*, Torr., with immature fruit, and *Arctostaphylos Uva-ursi*, Spreng, while *Comandra livida*, Richardson, was found in a sandy slashing in the woods. Growing along the track was a depauperate form of *Rosa lucida*, Ehrh., and in a woodland back of the station *Helianthemum Canadense*, Mx., *Spergula arvensis*, L. in fields, *Pilea pumila*, Gr. in low woods, *Panicum depauperatum*, Muhl. on dry banks, and *Amblyodon dealbatus*, Pal. Beauv. on the bottoms of dried up hollows in cranberry marshes, were also picked up, and made welcome additions to our list. In a swamp at Bridgetown, a neighboring village, is a fine grove of *Thuja occidentalis*, L., a tree, we were informed, which, though common in the adjoining province of New Brunswick, is very scarce in Nova Scotia.

Jumping from Kingston to Kentville, behold us in a very pretty little town, with many of the streets bordered with magnificent specimens of *Ulmus Americana*, L. It was our starting point for a drive across Annapolis valley, famed for its fertility, to the "Look-Out" at Cape Blomidon. The valley lies between the North and South mountain ranges, and thus sheltered from the cold winds and chilling fogs of the Bay of Fundy, with a wonderfully rich soil, has earned the title of the "Garden of Nova Scotia." Early morning saw us under way, our path lying past vast orchards and fertile farms, each vying with the other in its appearance of thrift and good husbandry. Picking up, *en route*, *Potamogeton gramineus*, L., *Sagittaria variabilis*, Eng. var. *angustifolia*, Gr., and *Carex hystericina*, Willd, by noon we had reached the mountain top, and a glorious prospect lay at our feet. Five counties were in view at once, and the panorama of fields, meadows, and orchards, with the white farm houses surrounded by trees, and here and there a village with its church spires glancing in the sunlight, was one seldom surpassed in any land, and which, once seen, could never be forgotten. While feasting our eyes on the scene, we had the good fortune to detect *Botrychium matricariæfolium*, A. Br. along the grassy roadside, while in crevices in the face of the cliff were fine bunches of *Woodsia Ilvensis*, R. Br.

On leaving Kentville our road entered the country which Longfellow has made famous. From Grand Prè, literally "great meadow," one has only to look about on the ocean of billowy grass to see how apt was the name, and we can not wonder at the unwillingness of the Acadians to quit so peaceful a spot. Few

traces of the French village are now to be found, but the hollows that once were the cellars of their houses are still pointed out. There, too, now gnarled and decaying, are the willows that formerly lined the streets and perhaps witnessed the troth-plight of Gabriel and Evangeline, while the dykes, built to keep the sea from their meadows, and at which sturdy Basil himself may have lent a helping hand, yet serve the same useful purpose. Great as is the charm of the place to the poet or sentimental tourist, it offers but scant attraction to the botanist, and accordingly we pushed on to Windsor, passing, just on the outskirts of that place, the old homestead of "Sam Slick" (Judge Haliburton). The Avon, on which the town is built, is principally made by the tide from the Basin of Minas, and is a noble stream at high water; at low water, shorn of its beauty, the banks and far-stretching flats of red mud are something stupendous. Strolling out to Fall Brook, about four miles from the town, in low places along the highway were found *Juncus articulatus*, L. and *Carex retrorsa*, Schw., and on the hillsides bordering it *Panicum dichotomum*, L. In meadows by the creek were fine specimens of *Oxalis corniculata*, L. var. *stricta*, Sav., and *Oenothera pumila*, L., while *Carex panicea*, L., grew along a ditch being dug for the waterworks in a boggy field. A day having been put in at this place, we boarded the evening train for Halifax, and hastened to seek in our new quarters a much needed rest.

On July 3d we turned, for the last time, our faces away from Halifax, preparatory to a run through Cape Breton, the northern extremity of the province. At Bedford, nine miles from the city, in addition to a host of new, many of our old acquaintances reappeared, and in much better collecting condition. Near the "Prince's Lodge," once the residence of the Queen's father, the Duke of Kent, for a long distance the railway track was covered with beautiful specimens of *Aquilegia vulgaris*, L., in both flower and seed. Here likewise was a very large-flowered form of *Geranium Carolinianum*, L., and in rocky places *Poa cæsia*, Smith. Dry gravelly roadsides yielded *Urtica dioica*, L., and boggy spots were brilliant with *Myosotis laxa*, Lehm., or, as Coleridge so prettily describes it,

"That blue and bright-eyed flow'ret of the brook,
Hope's gentle gem, the sweet forget-me-not."